

What's NEXT?

The Nationwide Evaluation of X-ray Trends (NEXT) is a national program conducted annually to measure the x-ray exposure that a standard patient receives for selected x-ray examinations. This program is conducted jointly by the Conference of Radiation Control Program Directors (CRCPD), an association of state and local radiation control agencies, and the Food and Drug Administration's (FDA) Center for Devices and Radiological Health (CDRH).

Facilities are randomly selected and the surveys are performed by personnel from the participating states. Each projection is surveyed utilizing a clinically validated exposure equivalent phantom representing a standard reference patient. This standard NEXT patient stands 172 cm (5 ft, 8 in) in height, and weighs 74.5 kg (164 lbs). The phantom used for the fluoroscopy survey is equivalent to a patient thickness, measured P/A, of 23 cm (9 in).

In 1996 the selected examination was upper gastrointestinal fluoroscopy. Over 300 facilities were surveyed, with the sample divided nearly equally between hospital and non-hospital facilities. Specific information was obtained pertaining to the equipment, facility work load, and radiographic technique. Information related to dose was also collected such as film/screen combination, grid use, beam quality, x-ray output, and the quality of film processing. The procedure followed in 1996 was essentially the same as that used for the 1991 fluoroscopy study.

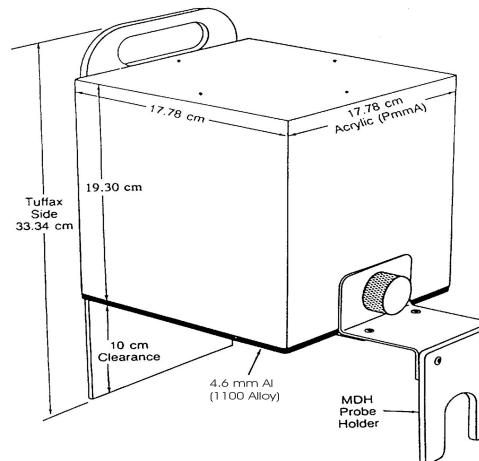
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SURVEY RESULTS

YOUR FACILITY

entrance exposure	
rate (R/min)	
fluoroscopic mA	
fluoroscopic kVp	
half-value layer	
spot film ESE	
# of spot films	
total spot film exp	
weekly workload	
recording mode	
film processing	
STEP* Test Result	
holes visible	
meshes visible	

*Sensitometric Technique for the Evaluation of Processing



Nationwide Evaluation of X-Ray Trends (NEXT)

1996 Upper G.I. Fluoroscopy Survey

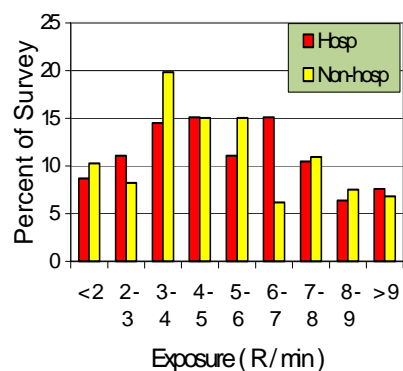
Conference of Radiation
Control Program Directors

and

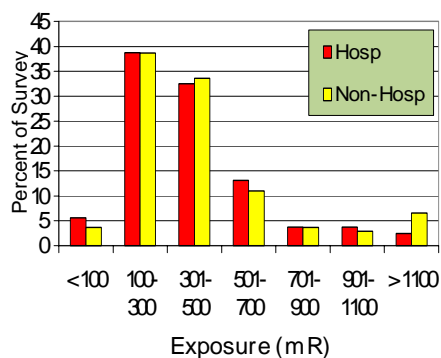
The Center for Devices and
Radiological Health

U.S. DEPARTMENT OF HEALTH
AND HUMAN SERVICES
Public Health Service
Food and Drug Administration

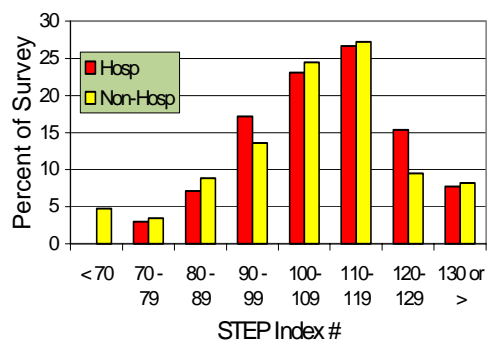
Fluoro Entrance Skin Exposure



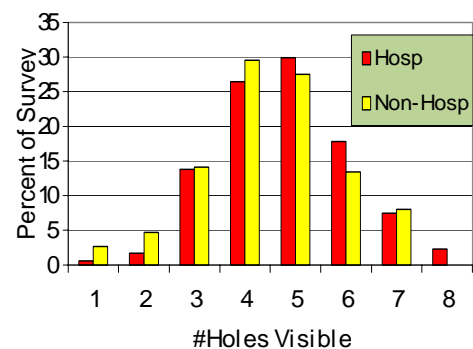
Single Spot Film Exposure



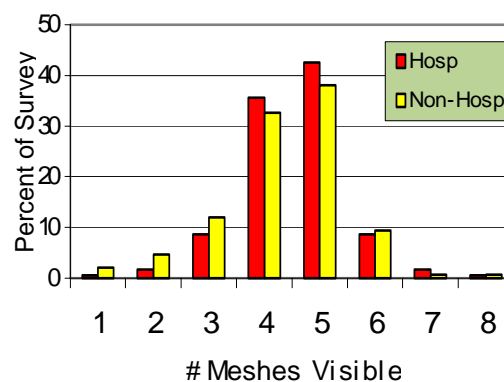
Film Processing Speed



Low Contrast Objects Score



High Contrast Objects Score



Data Summary

	Mean	Std Dev
fluoro EER (R/min)	5.2	2.4
fluoro tube current	2.3	1.1
fluoro kVp	99	14
HVL (mm Al)	4.4	1.0
spot film ESE (mR)	420	356
total # of spot films	12	5.5
total spot ESE (R)	4.956	5.093
weekly workload	12	10.5
processing speed *	107	19
# of holes visible	5.47	1.37
# of meshes visible	5.54	1.07

* normal processing range = 80-120

Recording Modes Available

	Number	Percent
spot film	300	87
photo spot film	68	20
VCR	45	13
Digital	53	15

Contrast Technique

	Number	Percent
single only	67	19.5
double only	107	31
both/ mostly contrast media	35	10
both/ mostly air	55	16
both equally	75	22